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United States Patent [19][11] **Patent Number:** **5,163,952****Froix**[45] **Date of Patent:** **Nov. 17, 1992**[54] **EXPANDABLE POLYMERIC STENT WITH MEMORY AND DELIVERY APPARATUS AND METHOD**[76] **Inventor:** **Michael Froix**, 3433 Woodstock La., Mountain View, Calif. 94040[21] **Appl. No.:** **582,521**[22] **Filed:** **Sep. 14, 1990**[51] **Int. Cl.⁵** **A61F 2/06**[52] **U.S. Cl.** **623/1; 623/12**[58] **Field of Search** **623/1, 11, 12; 604/96**[56] **References Cited****U.S. PATENT DOCUMENTS**

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[57] **ABSTRACT**

Self-restrained stent for use in a lumen of a vessel of a patient having a body with the vessel therein, comprising a substantially cylindrical member formed of a plastic material having a built-in elastic predetermined diameter and having a memory provided therein of a diameter greater than the predetermined diameter. The plastic is characterized in that it will attempt to assume the greater diameter in its memory upon occurrence of one or more of the following conditions:

- (a) adsorption of heat by the plastic material;
- (b) adsorption of a liquid by the plastic material; and
- (c) a change in the pH in the liquid in which the plastic member is disposed.

11 Claims, 1 Drawing Sheet